

# Zoom Sweaters Ltd. (9741)

## Irene Knitwear (9742)

13 Daila, Demra, Dhaka, Dhaka

11.MARCH.2014



**ACCORD**  
on Fire and Building Safety in Bangladesh



# Identified Priority 1 Concerns

## Steel Roof Structure

## 8<sup>th</sup> Storey Steel Roof Framing

Priority 1 Concern



There was present at the roof level a steel roof structure, portions of which were concrete topped. The steel framing displayed signs of overloading and was poorly detailed and poorly constructed. Most notably there was an alarming amount of observable deflection in the steel framing underneath the concrete topped portion.

## Steel Framing at Roof Level

Priority 1 Concern

Steel to Concrete  
Connection at 8<sup>th</sup> Floor



Poorly Detailed Recycled  
Steel Framing



Steel Framing at Roof Level

# Identified Priority 2 Concerns

## Excessive Slab Loading

Stacked Garment Bags Over a Large Portion of the Floor



As determined using the observed steel reinforcement ratio and the strength appropriate for stone aggregate concrete, the column working stress safety factor was less than desirable.

## Storage and Machinery at 6<sup>th</sup> Level

Textile Machinery Over a Large Portion of the Floor



## Identified Priority 3 Concerns

None

# Priority Actions

## Problems Observed Summary

**ITEM 1: (Priority 1) The steel roof structure was poorly constructed. Steel was observed to be, in part, recycled sections combined in a piecemeal fashion. Connection details were inconsistent and suspect in their capacity. Excessive deflection was observed under the portion of roof with concrete topping.**

**ITEM 2: (Priority 2) Storage of highly stacked thread rolls and the presence of industrial spinning machines was observed over the majority of the area of the 6<sup>th</sup> floor. Also, the 4<sup>th</sup> floor contained highly stacked sacs of fabric. The floors are not specially designated for loading higher than the typical factory floor loads. Resulting column loading/capacity checks indicate less than desirable safety factors.**

## Item 1 and Actions

The steel roof structure displays signs of overloading and is constructed in a poor fashion.

### Priority 1 (Immediate – Now)

- A detailed engineering assessment is to be performed upon the steel roof structure.

### Priority 2 (within 6 weeks)

- None

### Priority 3 (within 6 months)

- None

## Item 2 and Actions

Storage loading has not been explicitly accounted for on the 4<sup>th</sup> & 6<sup>th</sup> floors. Storage loading was present over a large portion of the floor area on the 6<sup>th</sup> floor and in localized areas on the 4<sup>th</sup> floor. Column load/capacity checks indicate low safety factors.

### Priority 1 (Immediate – Now)

- None

### Priority 2 (within 6 weeks)

- Factory engineer to review design loads and column stresses

### Priority 3 (within 6 months)

- Produce and actively manage a loading plan for all floors within the factory giving consideration to the floor capacity and column capacity.